Energy Multiplier Module (EM^2)
Quick Facts

General Atomics is developing the Energy Multiplier Module (EM^2), an economically-competitive approach to electricity generation that turns used nuclear fuel into energy without conventional reprocessing, in a closed fuel cycle, sustainable for decades.

EM^2 is transformational change for the nuclear economy

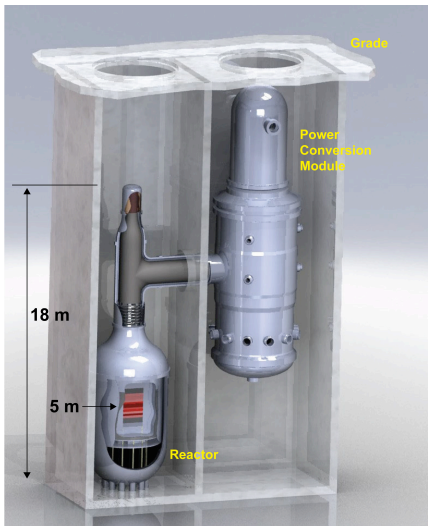
Current U.S. Conundrum

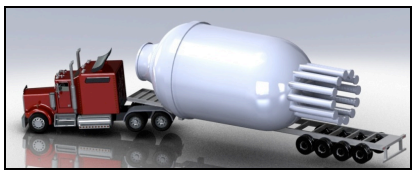
- Excessive capital cost of current nuclear reactor technology
- Unresolved disposition of used nuclear fuel, depleted uranium and weapons plutonium
- Proliferation resistance, requirement for alternative to Yucca Mountain repository
- Inefficient utilization of conventional reactor fuel at less than 0.5%
- Need for rebuilding U.S. nuclear energy workforce

EM^2 technology addresses all major U.S. nuclear energy policy issues

EM^2 Characteristics

- Reduces initial capital investment and power costs
- Uses used nuclear fuel, depleted uranium or weapons plutonium
- Minimizes need for long-term repositories
- Reduces need for uranium enrichment
- Eliminates conventional fuel reprocessing
- Site flexibility for electricity generation and process heat applications
- Grid capable
- Gas-cooled fast reactor
- Passively safe, underground sited
- Factory manufactured, shipped by rail or commercial truck
- No greenhouse gas emissions
- No refueling for 30 years





400 EM^2 reactors could provide ~100% of the current electricity output of nuclear reactors.

GENERAL ATOMICS